

tion, we can speak favourably of the book. It is written in a plain, lucid style; the descriptions are generally accurate, and the illustrations are good. It is somewhat peculiar in respect to the nomenclature which the author employs; very many of the frequently-inappropriate-and-hard-to-be-remembered Greek and Latin names being discarded for simple English words. F. W. S.

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ART. XX.—*Tableau of the Yellow Fever of 1853, with Topographical, Chronological, and Historical Sketches of the Epidemics of New Orleans, since their Origin in 1796, Illustrative of the Quarantine Question.* By BENNETT DOWLER, M. D., Corresponding Member of the Academy of Natural Sciences of Philadelphia, etc. etc. New Orleans, 1854. 8vo. pp. 66.

In the sixty-six pages of which this pamphlet consists, Dr. Dowler has contrived to condense more matter of an important and instructive character bearing directly upon the etiology and character of yellow fever, than would suffice, if fully developed, and examined in all its relations, to fill a goodly-sized volume of several hundred pages, and that, too, without any undue extension of subject or prolixity of style.

Amid the numerous points briefly touched upon by the author, as he passes his tableau rapidly before us, are embraced many important theses that we should be pleased to see more fully investigated by such as have the time and talent for the necessary research, and a mind habituated to strict logical analysis and deduction.

The first four chapters of Dr. Dowler's pamphlet are devoted to a brief, but still highly-interesting, chronological notice of the yellow fever epidemics of New Orleans, from their first occurrence, in 1796, to that of 1823, with a passing reference to the collateral range of these epidemics, their topography, and the insufficiency of any quarantine regulations as a protection against their influence.

Of the quarantine first carried into effect in New Orleans in 1821, Dr. Dowler remarks as follows:—

"The quarantine had been tried for three years, and yet two epidemics had occurred. The contagionists began to waver, and the joint committee of both houses of the legislature, disagreeing on quarantine, were discharged from the consideration of the same on the last day of November, 1824.

"Experience, which is ever opposed to false theory, convinced the public that quarantine was not only useless, but supremely mischievous in a city so exclusively commercial that a free, untrammelled trade, with freedom of ingress, egress, and progress, is not simply useful only, but a social necessity, involving the question of subsistence or starvation. Accordingly, on the 19th of February, 1825, the legislature repealed the quarantine laws which it had enacted just four years previously; at the same time, the quarantine grounds were directed to be sold. During the eight years that followed, without quarantine, the yellow fever diminished. It never equalled that which took place under the strict quarantine of 1822, when, according to some authorities, 2,000 died of that malady, although the records which I have examined, show only 808—a number sufficiently appalling in the comparatively small population then resident in the city, especially during the hot season; the whole reported mortality for the three months ending with October being 1,362. The ratio of mortality in the Charity Hospital was enormous; out of 349 admissions, 239 deaths, and only 98 cures took place. The maximum mortality upon one day rose to 80—of yellow fever, to 60."

The idea of preventing the occurrence of yellow fever in a city like New Orleans, or, indeed, any other in which there exists all the local causes necessary for its production, by the strictest quarantine, is, in the present state of medical knowledge, supremely ridiculous. Still, we should not be inclined to

advocate the entire abandonment of all quarantine regulations. It is certainly not prudent to permit a vessel, especially during the hot season of the year, to come to one of the wharves of a city, and there unload her cargo, before due precaution had been taken for her thorough ventilation, and to ascertain that no portion of her cargo was in a condition calculated to produce disease.

That the yellow and other malignant fevers may be introduced amid a community by the impure air generated in the hold of a foul vessel, especially when crowded with passengers, or having on board damaged goods of a certain description, cannot, we believe, be disputed. And, although the disease thus introduced may not spread beyond those engaged in unloading such vessel, or those who reside in the immediate vicinity of the wharf at which she lies, it, nevertheless, shows the importance of guarding, at all times, against the introduction of disease from this source, by judicious quarantine regulations.

"The geographical area of yellow fever in 1853," remarks Dr. Dowler, "compared with former invasions, was greatly extended, including Florida, Alabama, Louisiana, Mississippi, Arkansas and Texas—six States of the Union of vast territorial expansion, consisting of alluvial, diluvial, and tertiary formations, valleys, dry prairies, elevated plateaux, irregular terraces, low undulating hills and bluffs, and pine woods, interspersed with bayous, lakes, shallow basins, shaking prairies, large bays, dense cypress swamps, cane brakes, colossal grasses, inundated plains—a region undisturbed by volcanic action, where the geological or telluric causes of disease, if such be really regarded as causes, must be nearly uniform. Of these States, five are washed by the almost tideless Gulf of Mexico, presenting a vast depressed, marshy, sandy, shelly, rockless littoral, which curves from the Rio del Norte to the peninsula of Florida, deeply indenting the temperate, yet approaching the torrid zone, having low outlying islands in front, and numerous great rivers flowing through the background, bringing detrital matter from the high lands and primitive formations of several mountain chains, with tertiary limestones and coral reefs, trending along its eastern portion upon the Floridian peninsula.

"As immense importance has always been attached to the topography of yellow fever, which has been generally attributed to swamp-exhalation, it will be necessary to take a closer view.

"The elevated zone called the bluffs, a broken diluvial plateau, touching the Lakes Pontchartrain and Maurepas on the south, where it is most depressed, running north between the Pearl and Mississippi Rivers; the eastern shore of the latter, for hundreds of miles, with some interruptions, is overlooked by these impending terraces, which sustain forests of colossal magnolias, pines, oaks, liquidambers, &c.—a platform which sundry learned medical writers have indicated as a secure retreat from yellow fever, although neither the past nor the present justify this theoretical view. The epidemic of 1853 raged fully as much in this region as in the most depressed plains among the vast cypress swamps and salt-water marshes of littoral Louisiana. The epidemic was most fatal in this region, from its southern border upon the northern shore of Lake Pontchartrain, at Madisonville, Mandeville, Louisburg, and Covington, to the higher lands of Baton Rouge, Clinton, Port Hudson, Jackson, Bayou Sara, St. Francisville, Fort Adams, Natchez, Grand Gulf, Yazoo, and Vicksburg, not sparing the little villages of the piny forests.

"Thus the towns of Louisiana, Alabama, and Mississippi States, elevated from 20 to 400 feet, and more, situated on the tertiary formation, often in the pine lands, remote from swamps, being high, dry, and clean, suffered more, in many instances, than New Orleans, situated, as it is, upon the recent alluvium, or newer pliocene, touching the river in front, and dipping into the stagnant swamps of the cypress basin in the rear, and intersected everywhere with filthy gutters, sewers, ditches, or canals. The elevated zone of pine woods in northern Louisiana, and elsewhere in the adjoining States, forms a striking contrast to the depressed plains, cypress basins, and marshes of the southern delta. The epidemic of 1853, like previous ones, goes to prove that marsh-miasma is not the specific cause of yellow fever, as is generally supposed. The very towns which the lamented Drake recently designated, on theoretical grounds, as safe retreats from yellow fever, have suffered most from it."

After presenting a slight outline of a few towns in which the yellow fever appeared in 1853—some in elevated, some in depressed situations—Dr. Dowler remarks that, from this imperfect geographical enumeration, it is evident that *altitude* did not modify the epidemic of 1853. The general opinion that yellow fever appears only in depressed localities, or marshy plains, is contradicted by innumerable facts observed in this country as well as in Europe.

"Without," says Dr. Dowler, "the remotest wish to add another to the many futile expositions of the specific cause of yellow fever, I may be allowed to refer to two coincidents which attended the first and last epidemic eruptions of this disease in New Orleans. The original basin of Canal Carondelet was excavated in 1796; the capacious basin now being excavated for the same canal, about a mile from the city and from the former, was, to a great extent, dug out just before the epidemic. Frequent visits to this spot, with the view to its geological character, gave me opportunities of noticing whatsoever transpired in that district in the spring, before the epidemic appeared. The labourers, nearly all Irish, enjoyed very good health, although the emanations from the bayou, where the scene of labour lay below the terminus of the old canal, were most offensive. The water was so impure that many of the fish were killed, adding to the offensive effluvia. This, however, was attributed, not so much to the filth from the streets, as to the deleterious refuse matters from the gas-works of the city."

In reference to the generally-admitted influence of frost on the arrest of yellow fever, we quote the following facts as stated in the work before us:—

"About the 25th of October, a white frost appeared, for a few nights, at many of the interior towns of Louisiana, which was received as the harbinger of returning health, but which did not, in a marked degree, arrest the march of the epidemic. Warm weather, however, soon returned, and has continued to the present (the third week in December); but this did not revive the epidemic in places where it had declined, as in New Orleans, and many other places.

"In the town of Clinton, in the parish of West Feliciana, lying between the Mississippi and Pearl Rivers, 100 miles northwest from New Orleans, the epidemic began about one month before this frost, but at the latest dates (December 10th) it had not yet disappeared—75 having died out of 350 or 400 who did not fly from the town, as did about 1,000 persons. Several blacks died.

"In places," says Dr. Dowler, "where the epidemic had steadily and greatly declined, the return of absentees, and the influx of strangers, did not reproduce the epidemic, as was generally expected. The arrival of absentees, mariners, steamboatmen, and immigrants, amounting to about 50,000, in New Orleans, did not, in any appreciable degree, affect the ratio of declination. The mortality, from yellow fever, officially announced for the week ending December 18, 1853, being three, discloses a fact of supreme significance against the contagiousness of this disease, inasmuch as the city is, if any city can be, reeking with contagion."

The sixth chapter is devoted to a consideration of the mortality from the yellow fever of New Orleans and Mobile, during the epidemic of 1853. In the former city, the entire mortality is estimated, in round numbers, at 8,400.

"The maximum mortality of the yellow fever of 1853 arrived sooner in the season than usual, and is more truly represented by that of the plague in London, in 1665; namely, June 590 deaths, July 4,129, August 20,046, September 26,230, October 14,373, November 3,449; total, 68,817.

"According to the report of the Howard Association, published late in December, the Society had under its care during the epidemic of 1853, no less than 11,088 yellow fever patients—5,203 males, 5,885 females—of whom 2,942 died, and 8,146 were cured. Expenditure, \$159,190 32. Average for each patient about fourteen and a third dollars. Of this number (5,845), much more than half were Irish; German (2,890), nearly a quarter; French, 436; United States (716), less than one in sixteen of the whole. Hence, it appears that Ireland and Germany give 8,735; other countries, 2,353.

"The Association, during the epidemic, received, from all parts of the Republic, the sum of \$228,927 46; more, indeed, than they had need of, leaving a large surplus to be put out at interest for this charity.

"Omitting Spain and the United States, the yellow fever zone contributed but nineteen; the plague zone of the east, as Palestine and Greece, but seven to this formidable aggregate of 11,088.

"The predominance of female patients in the above enumeration is remarkable, inasmuch as that sex is the least susceptible to the yellow fever, and contribute to the mortality from this disease in a ratio greatly inferior to males. The most probable explanation is this—females preferred the Howard hospitals to the charity hospitals and the city hospitals established by the Board of Health."

From an examination made by Dr. Dowler of the interments during the prevalence of the epidemic, he arrives at the conclusion that the entire mortality of females, for 1853, was half as great as was that of males.

"This high ratio of female mortality is, however, one of the most extraordinary features of the late epidemic. Of 1,450 who died of yellow fever in August, September, and October, 1841, but 220 were females, or nearly one in seven. The ratio of mortality among children will probably be found enormously high from fever in 1853, compared with preceding years. This will appear obvious by Mr. Maginnis's list, compared with the following extensive analysis of the epidemic of 1841: thus—I made thirty-three series, each consisting of thirty persons; I then took the youngest one in each series (among these 990 dead), which gave these ages: 15—17—17—2—5—20—19—16—20—17—15—17—18—19—8—2—7—18—18—19—8—6—8—2—15—3—18—14—2—18—3—5—19. Scarcely an infant in the whole series.

"In order to test, approximatively, the ratio of infantile deaths from fever, I counted the ages of all fever victims who were interred in the following cemeteries on the 10th of August, namely, Cypress Grove, No. 1 and No. 2, and St. Patrick's, amounting to eighty-nine known ages, and two called "infants" (say ninety-one), among which were two aged 2; one aged 3; one, 4; which, with the two infants, make six out of ninety-one—a result which could not have been anticipated from the history of anterior epidemics, as the very young and very old, as well as women and negroes, had always suffered less than other classes."

Chapters seven and eight treat of the mortality of the epidemic in 1853 among the Creole population. From the latter chapter, we present the following interesting statements:—

"Although the word *Creole*, in its usual acceptation, means a white person, it applies to all races, as Creole negroes; it even applies to the inferior animals, and things.

"It is the resident city Creole, not the country Creole—not the Creole who migrates every summer to New York, London, or Paris—that may hope for as good health as is possible to humanity, while two or three hundred others daily fall victims around him; a definition which excludes a great many called Creoles, and one often forgotten in writing on the subject of yellow fever. Hence arises many apparent contradictions among authors who use the word in different senses.

"In former, still more than in recent times, has this fundamental distinction been overlooked. In a great majority of the works on yellow fever in the West Indies, and even in Louisiana, where Creoles are said to suffer from this disease, the true explanation is, that these persons are *Creoles of the country, not of the city*; or, at most, they reside in the latter occasionally, chiefly in the winter, and are, therefore, liable to the disease, though they usually have it in a milder form than strangers, and very rarely die.

"The simple fact of being born in New Orleans is not, in itself, protective. Thousands are thus born of uncreolized parents, who pass through the city, as immigrants, or who reside in the city in the winter only. Their return to the city might, in this way, swell the number of the so-called Creoles to hundreds every epidemic.

"City creolism is here used as a more precise and restricted term than acclimation, and denotes that immunity from yellow fever, whether transmitted from parents born and resident in the city, or that immunity acquired by long resi-

dence, with or without having suffered an attack of the disease; in any case, it is for the most part hereditary—the exception consisting of a susceptibility to a slight fever, as proved in 1853.

"City creolization is not peculiar to New Orleans, Mobile, Charleston, Havana, or Vera Cruz; but there are many new southern towns, or rather new aggregations of new-comers, where its influence is less obvious, certain, and uniform, or places where it may fail altogether.

"Congenital city creolism, that is, the constitutional modification incidental to the being born of Creole, or thoroughly creolized parents, with continuity of city residence, exempts the individual from yellow fever with nearly the same uniformity that vaccination prevents the smallpox or varioloid. The varioloid is, as all know, modified smallpox, happening to one who has undergone vaccination, or the smallpox previously, the frequency of which is probably as great as the frequency of yellow fever among city Creoles who have never absented themselves for one or more winters in northern climates.

"All born beyond the limits of the city are susceptible to yellow fever on coming into the city, or into a village when yellow fever prevails. In 1853, yellow fever has, for the first time perhaps, prevailed to some extent in the rural districts, remote from towns, among isolated persons who had not visited them. But, in almost all of these instances, the disease prevailed in aggregations of people which are virtually towns—as the plantations where the population is concentrated at one centre, often forming a village of from 100 to 500 or more persons. But, in the present state of our knowledge of the prevalence of yellow fever in the rural districts in isolated families, scarcely anything can be pronounced positively as to the extent or frequency of attacks among such as had no connection with towns as visitors. Whether, on the other hand, city Creoles who have removed to the country, who have never resided one or more winters in northern latitudes, have in any instance suffered an attack in the country, or on returning to New Orleans, is unknown. Second attacks are rare.

"Creolization in the city, with or without having had yellow fever, is equal, as a protection against yellow fever, to congenital or native creolism. This immunity is usually acquired in less than ten years, often in five, but to this rule very many exceptions occurred in the extraordinary or exceptional epidemic of 1853.

"City immunity, native or acquired, in similar cities—as New Orleans, Charleston, Mobile, Pensacola, Havana, Vera Cruz, and other places in the present limited yellow fever zone, is probably identical and mutually protective in all such places, while nativity in cities once in the yellow fever zone, in which yellow fever has not been prevalent for many years—as in Baltimore, Philadelphia, New York, Boston, Cadiz, Seville, and other places—affords no protection.

"City creolism, both native and acquired, is, to a great degree, as before remarked, hereditary, or transmissible from parents to children. At least, the exceptions to this law are few, and fatal results almost unknown, as may be proved by the bills of mortality, though this is, like many other indubitable truths, boldly denied, particularly since the decline of the epidemic of 1853—the most mortal, erratic, and extraordinary ever seen in New Orleans. It will have been seen what warrant the terrorists have for denying creolization.

"Setting aside the epidemic (of 1853), and reasoning from what is fully proved by the past—the best expositor of the present—it will be seen what little foundation there is for the utter rejection of creolism and acclimatization, which, in former years, was rung, and is still ringing, in the public ear.

"That many Creole children had, during the epidemic of 1853, a fever—a slight fever—yellow fever, if you please, known as such rather by the coexistence of the epidemic than from any severe symptoms among these children—a slight fever, never yet described, having generally but one paroxysm, lasting from six hours to one, two, or three days, scarcely ever requiring medication. That a few of these cases acquired an alarming violence, and even proved fatal, is most true—most deplorable. It will, no doubt, be found, upon a full examination of these fatal cases, that nearly all belonged to the following classes and conditions: although born in the city, their actual residence has not been

continuous, but has vibrated, like a pendulum between the country and the town, between northern schools and cities and New Orleans; or they have been born of unacclimated parents, whose continuous residence has been less than ten years, often not that of many months; or they have been born of parents one of whom is not acclimated; or, finally, they have been born while the parents resided temporarily in New Orleans (constituting a large class), and hence called Creoles, who, subsequently having come to the city, fell victims, and hence appear in the mortuary certificates as natives of the city."

We pass by the ninth and tenth chapters—the one on the liability of the African and Indian races to the yellow fever, and the other on the meteorology of the summer of 1853—both full, it is true, of interesting facts, to notice a remark made by Dr. Dowler in the next chapter, which treats of the sanitary condition of New Orleans. After the statement that—

"Enough is already known of the science of hygiene to warrant the conclusion that our crowding filth, a want of ventilation, incomplete drainage, and humidity, must be injurious to the health and detrimental to the physical comforts of the citizens of New Orleans. Healthy individuals, and still more the sick ones, need pure air, both when there is and when there is not an epidemic."

The author proceeds to notice the almost physical impossibility of any effectual underground drainage in New Orleans, from the peculiar position of the city below the level of the River Mississippi, and then remarks:—

"A gentleman recently from Paris, and, perhaps, the ablest quarantinist in New Orleans, informs me that in Paris, where underground drainage, with a soil elevation and declivity so vastly superior to New Orleans for this purpose, is mischievous. The Parisians find that the filth of the city accumulates in these subterranean sewers so as to send forth the most offensive and deleterious emanations. Hence, they prefer, after costly experiments, surface drainage, and wash off the filth into the Seine."

Now we think that there is some mistake in this. Paris has certainly not abandoned her plan of subterranean sewerage.

Underground drainage is invariably to be preferred, wherever there is no physical impediment to its adoption—as in New Orleans—to surface drainage. A proper construction of the sewers, together with their inlets, will obviate all inconvenience and danger that would otherwise arise from the accumulation of filth within them, or from the discharge of offensive or injurious gases at their openings. In a sanitary point of view, ample experience has shown that surface drainage is, excepting under very peculiar circumstances, in every respect, inferior to a properly-planned, and well-conducted system of underground sewerage.

In chapter twelve, we find some sensible remarks on the subject of contagion and infection in reference to yellow fever, and on the propriety of emigration as a means of avoiding the disease.

With the mass of those American practitioners who have had the most ample opportunities of studying the etiology of yellow fever, Dr. Dowler denies its contagiousness. All the facts he has been able to collect have convinced him that, beyond the range of the epidemic influence—of the infected districts—there is no danger of an attack, however close may be the contact with those labouring under the disease, who have been removed from the locality where they were attacked.

There is probably much truth in the following remarks of Dr. Dowler:—

"Epidemics have not only a limited period of increment and decrement in any one year, but they usually have more prolonged periods of increment and decrement, through series of years, often constituting what may be called a cycle of variable duration, after which they generally cease. So it was with the plague in Europe; so it was with the yellow fever in the Spanish peninsula; so it was with the cities of the United States in the north—as Boston, New York, Philadelphia, Baltimore, and other places. Its invasion of the southern tropic at Rio, so recent and severe, together with its gradual decline in the north temperate zone, may be the precursors of its further northern declination, and southern advance; so that both Charleston, Mobile, New Orleans, and other southern towns and districts have now, at least, the same probabilities in favour

of approaching exemption, that many other cities further north had, more than half a century ago, before yellow fever appeared on the banks of the Mississippi. New Orleans is now, and has long been, near the northern border of the yellow fever zone. If yellow fever has, as may be the case, reached its culminating point in this city, its history elsewhere in the temperate zone indicates a progressive decline."

We close our notice of the work before us, with the following quotation from the remarks of Dr. Dowler in reference to the "*ens epidemicum*." We entirely agree with him that "it is better to acknowledge ignorance than to advocate an error. It is better to keep a question of this sort open, than dogmatically to close it against investigation. In the former case, the truth may be discovered; in the latter, never. To know ignorance is preferable to ignorance of ignorance."

"It is most certainly the duty of every writer on yellow fever," says Dr. Dowler, "to explain the cause of it if he can, but it is equally his duty not to sin against the decalogue of logic, any more than against the decalogue of Moses. Fortunately, the *conditions*, if not the *causes*, of yellow fever are, to a considerable extent known: for example, it is known to be connected, no matter how, with the warm season of the year, with unacclimated constitutions, with aggregations of people in towns and villages, etc. It rarely attacks rural populations, unless they crowd together so as to become virtually towns.

"A correct appreciation of these conditions is next in importance to the discovery of the cause of yellow fever—probably the former may prove, after all, to be more important; for the discovery of the cause by no means warrants the conclusion that it is necessarily a removable or a remediable one."

D. F. C.

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ART. XXI.—*Essay on the Mechanism and Management of Parturition in the Shoulder Presentation.* By Wm. H. BOLING, M. D., of Montgomery, Alabama. Charleston, 1853. 8vo. pp. 91.

THIS is a most able and instructive essay on a subject of deep interest to the practitioner of obstetrics. On every point connected with that subject the author has presented the facts and observations recorded by the leading authorities, with their views and instructions, and has carefully compared these with the results of his own experience and reflections.

The description of the cases included under the general term of shoulder presentations; the examination of the probable cause to which these malpresentations are to be attributed; the account of the symptoms which should lead us to infer their occurrence, whether constitutional or tangible; the explanation of the mode of determining the position in which the shoulder, whether the right or left, presents; the remarks on the mortality attendant upon this variety of malposition; on its spontaneous termination, by version or evolution; on its complication from a descent of the arm, and the exposition of its proper management under the several circumstances in which the obstetrician may be called upon to act, as presented by Dr. Boling in the essay before us, are all marked by that sound sense and judgment which were to be anticipated from a well-informed, experienced, and observing practitioner.

From a careful study of the essay of Dr. Boling, clear views cannot fail to be acquired of the nature and management of a condition of parturition, which, when it occurs, is always perplexing to the inexperienced obstetrician, and even to the most skilful a source of no little solicitude.

Dr. Boling believes that spontaneous delivery, in cases of shoulder presentation, is possible more frequently than is generally supposed. Even in a majority of instances occurring among women in the South, including negroes and whites, he supposes the child may ultimately be expelled by the natural powers; often, he adds, it is true, at the expense of much constitutional suffering to the